(Inserm, 2008). Recent literature reviews demonstrate that some exergames (Wii Sports, Dance Dance Revolution...) have beneficial physiological effects [1,2]. However, these games lead to moderate improvements since they were not specifically developed for rehabilitation purpose. This study explores the effects of a rehabilitation program based on a serious game, developed in collaboration with clinicians, with insight on the functional autonomy of nursing home residents.

Methods We test the serious game Medimoov, developed by the company NaturalPad. 12 institutionalized older adults (age: 87.8 ± 7.6; mass: 60.6 ± 16.7; height: 158.8 ± 7.2) were included. A randomization was done: one group took part in a 2 months rehabilitation program based on the use of Medimoov (3 sessions per week); the other is a control group with no training. Functional autonomy was quantified pre- and post-rehabilitation by the Short Physical Performance Battery (SPPB).

Results 8 older adults (4 per group) were assessed pre and post the 2-month period. The comparison of each group performance between pre- and post-assessment were realized using a non-parametric Mann & Whitney test. The results show a significant increase of SPPB score in the rehabilitation group (P < 0.04).

Discussion Despite the few number of subjects, a significant increase of SPPB is induce by a 2 months rehabilitation program with Medimoov. This result will be confirm in a larger population.

Keywords Functional autonomy; Fall; Nursing home; Institutionalized older adult; Serious game

Disclosure of interest The authors have not supplied their declaration of conflict of interest.

References
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**Effects of a guided self-rehabilitation contract in patients with moderate stage Parkinson's disease**

S. Joudoux a,*, L. Taravella-Poussin b, E. Hutin b, J.M. Gracies (Prof) a, N. Bayle (Dr) b
a Hôpital Albert Chenevier, Créteil, France
b GH Henri Mondor
*Corresponding author.
E-mail address: sandrine.joudoux@ach.aphp.fr (S. Joudoux)

**Introduction** This study compared two different applications of Guided Self-rehabilitation Contracts (GSC) in Parkinson's disease, individual (I) or group-wise (C), in a 3-month intensive training focused on balance.

**Methods** Fourteen patients were randomized into 2 parallel groups (I and C) with one physical therapy session every 10 days for 3 months. Each session associated education and exercise prescription that each patient had to perform daily between sessions. Each patient was to complete a log recording daily work and wear a pedometer. Evaluations, OFF and ON, included Global Mobility Task (GMT), UPDRS III, proof of effort, 20-m walk test, 2-minute endurance test and Functional Reach Test (FRT).

**Results** Results of the two groups were similar. Patients worked alone about 40 minutes a day, 6 days per week. Improvements involved the daily number of steps (+19.2%, P = 0.091), UPDRS III-OFF (−30.1%, P = 0.029), GMT-ON (−11.2%, P = 0.042) and stride length at comfortable speed (+9.6%, P = 0.029).

**Conclusion** An intensive rehabilitation program in the form of a GSC is feasible in Parkinson's disease, either individually or collectively; it seems to reduce parkinsonian symptoms and to bring functional benefits.

**Keywords** Guided self-rehabilitation; Parkinson; Physiotherapy; Intensive rehabilitation

Disclosure of interest The authors have not supplied their declaration of conflict of interest.

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